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Columbia River Update

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Flood Control Operations

It will go down as the largest runoff volume on record at The Dalles if the preliminary Early Bird Water Supply Forecast for January through July is correct.

The 158 million acre feet (MAF) of water which passed The Dalles during those six months is estimated to be 149 percent of normal runoff volume, based on the historic 30-year period 1961 - 1988. The previous high was 156 MAF recorded in 1974. Without the upper Columbia and Snake River dams, the peak flow of 571,000 cfs at The Dalles would have climbed to nearly 880,000 cfs.

In the lower Snake River, the April to July water supply forecast shows 34 MAF passing Lower Granite Dam, making 1997 a contender for one of the top three years in runoff volume. Final numbers will be available in late summer. Peak flows reached 226,000 cfs, a reduction of 100,000 cfs over unregulated flows, made possible because of Dworshak, Brownlee and the upper Snake system dams.

Regulating for 1997 flood control operations prevented more than $1.53 billion in damages to the Lower Columbia area below Bonneville. Without flood control, the Vancouver harbor level, which reached a high of 19.1 feet in mid-June, would have topped 28.3 feet, about a foot higher than seen in the great flood of February 1996. Flood stage at the I-5 bridge in Vancouver is 16.0 feet.

Today, harbor levels are below nine feet and are expected to recede to between one and five feet by early August. Tidal influences are more pronounced when harbor levels fall.

Flows at John Day/The Dalles and McNary dams will be in the 250,000 -300,000 cfs range for the next week, while flows in the Snake River will average between 80,000 - 100,000 cfs.

A minimum flow of 100,000 cfs in the lower Columbia is needed to meet power loads; the target flow is 200,000 cfs at the index point of McNary Dam.

The Corps' Hot Line which provided daily forecasts on flows, spills harbor levels and John Day reservoir elevation proved popular with navigators and irrigators, who initially feared significant impacts as a result of potential peak flows and reservoir operations for flood control. During the March to June time frame, however, the John Day reservoir elevation dipped to 257 feet just once; otherwise operating for the most part between 261 - 265 feet.

Fish Operations

High flows mean higher spill and increased Total Dissolved Gas (TDG) percentages in the river. The Corps, charged foremost with the protection of human life and property, worked with its regional partners to reduce TDG and minimize impacts on fish by adjusting spill patterns and making changes to reservoir and turbine operations.

Forced spill resulted in high total dissolved gas (TDG) levels; gas bubble trauma (GBT) was observed in more than 20 percent of the juvenile fish on several occasions at some dams. The overall impact to juvenile fish survival of the high TDG levels is not known at this time. The percentage of juvenile fish with GBT signs in fins had declined substantially at most projects between late May and late June.

In response to the unusually high flows, the projects were forced to cope with excessive debris in the river by additional removal operations, reduced unit loading, and special spills to pass it on downstream. Juvenile fish transport operations were changed at the request tribes and state fish agencies.

Projected Flow Updates

Updated river flows and project operation data are available by calling the Corps Water Management hotline at **503-808-3989**. The hotline will cease operation for the season in July. Check out the Corps Water Management and Technical Management Team web pages and related web sites at **http://www.nwd-wc.usace.army.mil**